

### **REMARKS**

The foregoing amendment amends Claim 1 to clarify the invention. Claims 1, 3, 4, 7, 8, 10, 11, 13, 14 and 17 are now pending in this application. For the reasons set forth below, Applicant believes that the rejections should be withdrawn and that the claims are in condition for allowance.

### **REJECTION OF CLAIMS 1, 3, 4, 8, 10, 11, 13 AND 14 UNDER 35 U.S.C. 103(a)**

The Examiner rejected Claims 1-4 and 14-16 under 35 U.S.C. 102(b) as being anticipated by U.S. Publication No. 2001/0045322 to Nilsson *et al.* ("Nilsson"). As discussed below, this rejection is respectfully traversed.

The foregoing amendment to Claim 1 clarifies that a muffler includes an opening formed in a side face of the downstream pipe in the expansion room, the opening being formed **only** between the end portion of the upstream pipe and the first end portion of the downstream pipe. Support for the amendment to Claim 1 can be found in Figures 2 and 6 and the accompanying text. Figure 2 illustrates that the opening (10) in the downstream pipe (8) is formed in the elongated area extending substantially along the main axis of the downstream pipe (8) only between the end portion of the upstream pipe (11a) and the first end portion of the downstream pipe (8a).

Figure 1 of Nilsson describes that an inlet (2) conveys exhaust gases to a chamber (3) and on to a straight tubular section (5) and a bend (4). The bend (4) connects to an end pipe (6) that includes a perforated section (6a). Fig. 1 and [0021]-[0022]. As illustrated in Figure 1, the inlet pipe extends to the chamber wall and the straight tubular section extends from the side of the wall. The perforated section axially overlaps both the inlet pipe and the straight tubular sections. In contrast, Claim 1 requires that the opening is located in an axial direction only between the end portion of the upstream pipe and the first end portion of the downstream pipe. Figure 1 of Nilsson does not describe the particular location of the opening in the downstream pipe recited by Claim 1.

In the Response to Arguments section of the Office Action, the Examiner alleged that the current claim language (prior to the foregoing amendment) did not limit the perforated section to only that portion of the downstream pipe in the axial direction that extends between the end portions of the upstream and downstream pipes. In response, the Applicant has amended Claim 1 to more precisely clarify and claim that the opening is formed in an axial direction **only** between the end portion of the upstream pipe and the first end portion of the downstream pipe.

The Examiner contends that Nilsson teaches the possibility of removing the absorbing material (8) so that the pipe is surrounded with air. Even if the absorbing material (8) is removed and the space surrounding the pipe becomes empty, it is submitted that a part of the exhaust flowing out of the holes (9) will dead-end in the space defined by the material partitioning the chamber (3) from the other chambers. *See* double lines shown in Fig. 1.

According to one embodiment of the present invention, a main flow (a) of exhaust gas enters the downstream pipe (8) via the end portion of the downstream pipe. A secondary flow (b) of exhaust enters the downstream pipe (8) via the small holes (10a) via the slit (10b), so that in the downstream pipe (8), the main flow (a) and the secondary flow (b) interfere in the expansion room (3) with each other to effectively reduce flow noise and discharge noise, while also preventing a pressure loss in the exhaust gas. Fig. 1 and pg. 6, ll. 4-22. The interference of the two flows of the exhaust effectively cancel flow energy and reduce noise. Nilsson discloses sound absorbing material to absorb the sonic wave created by the exhaust. The reliance upon sound absorbing material indicates that Nilsson describes a different solution from that recited by Claim 1.

Claims 3, 4, 8, 10, 11, 13 and 14 depend from Claim 1 and are patentable over Nilsson for at least the same reasons discussed above.

#### **REJECTION OF CLAIM 7 UNDER 35 U.S.C. 103(a)**

The Examiner rejected Claim 7 under 35 U.S.C. 103(a) as being unpatentable over Nilsson (2001/0045322) in view of U.S. Patent No. 2,095,999 to Miles ("Miles"). Claim 7

depends from Claim 1 and is patentable over Nilsson in view of Miles for at least the same reasons discussed above.

**REJECTION OF CLAIM 17 UNDER 35 U.S.C. 103(a)**

The Examiner rejected Claim 17 under 35 U.S.C. 103(a) as being unpatentable over Nilsson in view of U.S. Patent No. 4,735,283 to Macaluso ("Macaluso"). Claim 17 depends from Claim 1 and is patentable over Nilsson in view of Macaluso for at least the same reasons discussed above.

**CONCLUSION**

In light of the foregoing, it is respectfully submitted that the pending claims are allowable and a notice of allowance is respectfully requested. If there are any issues that can be resolved via a telephone conference, the Examiner is invited to contact the undersigned at 404.685.6799. The Commissioner is authorized to charge any additional fees that may be due or credit any overpayment to Deposit Account No. 11-0855.

Respectfully submitted,

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